AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising:

a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of signaling data via at least one destination;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for support of signaling connection control services used by the signaling source node, wherein the user adaptation layer is selected from a group consisting of:

a signaling connection control part (SCCP) user adaptation layer (SUA);

an MTP3 user adaptation layer (M3UA) according to SIGTRAN protocol stacks;

an ISDN user adaptation layer (IUA); and

a V5.2 user adaptation layer; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from said signaling source node and ~~to map~~ for mapping the signaling target node name into a destination.

2. (Original) The communication apparatus of claim 1, wherein said destination is a peer signaling association.

3. (Original) The communication apparatus of claim 1, wherein said destination is a transport address.

4.   (Currently Amended) The communication apparatus of claim 1, wherein said name mapping unit is ~~comprised in said~~ implemented in the second protocol implementation unit.

5.   (Currently Amended) The communication apparatus of claim 2, wherein said name mapping unit ~~comprises~~ includes a mapping data interface unit ~~adapted to distribute and/or receive~~ for distributing and/or receiving signaling association attributes via ~~said~~ the signaling control layer.

6.   (Currently Amended) The communication apparatus of claim 3, wherein said name mapping unit ~~comprises~~ includes a mapping data interface unit ~~adapted to distribute and/or receive~~ for distributing and/or receiving transport address attributes via ~~said~~ the signaling control layer.

7.   (Currently Amended) The communication apparatus of claim 2, wherein said name mapping unit ~~comprises~~ includes a memory unit ~~adapted to store~~ for storing signaling association attributes locally in the communication apparatus.

8.   (Currently Amended) The communication apparatus of claim 3, wherein said name mapping unit ~~comprises~~ includes a memory unit ~~adapted to store~~ for storing transport address attributes locally in the communication apparatus.

9.   (Original) The communication apparatus of claim 3, wherein said transport address is an IP address.

10.   (Canceled)

11.   (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising:

a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of signaling data via at least one destination;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for support of signaling connection control services used by the signaling source node; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from the signaling source node and ~~to map said~~ for mapping the signaling target node name into a signaling target~~; and,~~ said mapping unit further ~~comprises~~ comprising a target node name resolution unit ~~adapted to map said~~ for mapping the signaling target into ~~said~~ the destination according to a specified algorithm;

wherein when mapping the signaling target node name into the destination, the target node name resolution unit considers at least one criterion selected from a group consisting of target node capability, target node load, and routing criteria association attributes.

12.   (Original) The communication apparatus of claim 11, wherein said destination is a peer signaling association.

13.   (Original) The communication apparatus of claim 11, wherein said destination is a transport address.

14.   (Original) The communication apparatus of claim 11, wherein said target node name resolution unit is of a client/server type responding to name translation requests from signaling source node clients in a local and/or remote manner.

15.   (Canceled)

16.   (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising:

a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of signaling data via at least one destination;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for support of signaling connection control services used by the signaling source node, wherein the user adaptation layer is selected from a group consisting of:

a signaling connection control part (SCCP) user adaptation layer (SUA);

an MTP3 user adaptation layer (M3UA) according to SIGTRAN protocol stacks;

an ISDN user adaptation layer (IUA); and

a V5.2 user adaptation layer; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from the signaling source node and ~~to map said~~ for mapping the signaling target node name into a destination, ~~and~~ said name mapping unit further ~~comprises~~ comprising a fault management unit ~~adapted to detect~~ for detecting an inoperative destination and ~~to select~~ for selecting another destination under the same signaling target node name.

17.   (Currently Amended) The communication apparatus of claim 16, wherein said destination is a peer signaling association and said fault management unit ~~is adapted to detect~~ includes means for detecting an inoperative peer signaling association and/or an inoperative signaling transport address in a peer signaling association and ~~to select~~ for selecting another signaling transport address under ~~said~~ the same signaling target node name.

18.   (Currently Amended) The communication apparatus of claim 16, wherein said destination is a transport address and said fault management unit ~~is to detect~~

includes means for detecting an inoperative transport address and ~~to select~~ for selecting another transport address under ~~said~~ the same signaling target node name.

19.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising ~~the steps of:~~

running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of signaling data via at least one destination;

running a user adaptation layer of the protocol stack on top of said signaling control layer for support of signaling connection control services used by the signaling source node; and

receiving a signaling target node name from the signaling source node and mapping said signaling target node name into a destination.

20.   (Original) The method of claim 19, wherein said destination is a peer signaling association.

21.   (Original) The method of claim 19, wherein said destination is a transport address.

22.   (Currently Amended) The method of claim 20, ~~which comprises a step to check~~ further comprising checking an availability of ~~said~~ the peer signaling association and ~~a step to trigger~~ triggering a build-up thereof.

23.   (Currently Amended) The method of claim 19, ~~which~~ further ~~comprises a step~~ comprising distributing and/or receiving destinations via ~~said~~ the signaling control layer.

24.   (Currently Amended) The method of claim 20, ~~which~~ further ~~comprises the step of~~ comprising storing signaling association attributes locally at the signaling source node.

25.   (Currently Amended) The method of claim 21, ~~which~~ further ~~comprises the step of~~ comprising storing transport address attributes locally at the signaling source node.

26.   (Original) The method of claim 21, wherein said transport address is an IP address.

27.   (Currently Amended) The method of claim 19, wherein the user adaptation layer is selected from a group ~~comprising~~ consisting of:

[[the]] a signaling connection control part ~~SCCP~~ (SCCP) user adaptation layer ~~SUA,~~ (SUA);

[[the]] an MTP3 user adaptation layer ~~M3UA~~ (M3UA) according to SIGTRAN protocol stacks[[,]];

[[the]] an ISDN user adaptation layer ~~IUA,~~ (IUA); and

[[the]] a V5.2 user adaptation layer.

28.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one destination;

running a user adaptation layer of the protocol stack on top of ~~said~~ the signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping ~~said~~ the signaling target node name into a destination~~; wherein~~ said mapping ~~of said signaling target node name into said destination is~~ step being carried out according to a specified algorithm.

29. (Original) The method of claim 28, wherein said destination is a peer signaling association.

30. (Original) The method of claim 28, wherein said destination is a transport address.

31. (Original) The method of claim 28, wherein said specified algorithm is a query responsive database algorithm.

32. (Original) The method of claim 28, wherein said specified algorithm is a table lookup algorithm.

33. (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising the steps of:

running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of exchanging signaling data via at least one destination;

running a user adaptation layer of the protocol stack on top of said the signaling control layer for support of supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping said signaling target node name into a destination[[;]], said mapping step including considering at least one criterion selected from a group comprising consisting of target node capability, target node load, and routing criteria destination attributes when mapping said signaling target node name into the destination.

34. (Original) The method of claim 33, wherein said destination is a peer signaling association.

35. (Original) The method of claim 33, wherein said destination is a transport address.

36.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising the steps of:

running a signaling control layer of the protocol stack on top of a packet transfer network for exchange of exchanging signaling data via at least one destination;

running a user adaptation layer of the protocol stack on top of said signaling control layer for support of supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node and mapping said signaling target node name into a destination; and

detecting an unreachable destination and selecting another destination under said the same signaling target node name.

37.   (Original) The method of claim 36, wherein said destination is a peer signaling association.

38.   (Original) The method of claim 36, wherein said destination is a transport address.

39.   (Original) The method of claim 37, wherein the step of detecting an unreachable destination relates to an unreachable peer signaling association and/or an unreachable signaling transport address in a peer signaling association and the step of selecting another destination under the same signaling target node name relates to selecting another peer signaling association under said same signaling target node name.

40.   (Original) The method of claim 38, wherein the step of detecting an unreachable destination relates to an unreachable transport address and the step of selecting another destination under the same signaling target node name relates to selecting another transport address under said same signaling target node name.

41. (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node~~s~~, said method comprising ~~the steps~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one destination;

running a user adaptation layer of the protocol stack on top of ~~said~~ the signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node and mapping said signaling target node name into a destination; and

maintaining a data base storing name spaces in relation to destinations and related attributes ~~and updating said data base~~.

42. (Original) The method of claim 41, wherein said destination is a peer signaling association.

43. (Original) The method of claim 42, wherein said destination is a transport address.

44. (Currently Amended) The method of claim 41, wherein ~~said updating of said data base at least comprises~~ the step of maintaining the database includes at least one step selected from a group ~~comprising~~ consisting of signaling node registration, mapping node registration, signaling node deregistration, mapping node deregistration, and signaling node routing policy change registration.

45.   (Currently Amended) ~~Method~~ A method of exchanging signaling messages between a signaling source node and a signaling target node using a name based addressing scheme, said method comprising ~~the steps of~~:

identifying a destination in relation to a node name of the signaling target node; and

exchanging signaling messages over a packet transport network from the signaling source node to the signaling target node using the name based addressing scheme.

46.   (Original) The method of claim 45, wherein said destination is a peer signaling association.

47.   (Original) The method of claim 45, wherein said destination is a transport address.

48.   (Currently Amended) The method of claim 45, further comprising the steps of:

identifying the destination in relation to a node name of the signaling source node; and

exchanging signaling messages over ~~said~~ the packet transport network from the signaling target node to the signaling source node using the name based addressing scheme.

49.   (Original) The method of claim 48, wherein said destination is a peer signaling association.

50.   (Original) The method of claim 46, wherein said destination is a transport address.

51.   (Currently Amended) ~~Method~~ The method of claim 45, further comprising ~~the step~~ storing a relation between a destination and a node name before exchange of signaling messages for subsequent name resolution.

52.   (Currently Amended) ~~Method~~ The method of claim 45, further comprising ~~the step of~~ grouping a plurality of destinations onto a node name.

53.   (Currently Amended) ~~Method~~ The method of claim 48, further comprising ~~the step~~ exchanging call messages on the basis of the name based addressing scheme.

54.   (Currently Amended) ~~Method~~ The method of claim 45, further comprising ~~the step of~~ establishing an initializing communication link from the signaling source node to the signaling target node using a predetermined target node address.

55.   (Currently Amended) ~~Method~~ The method of claim 54, wherein initializing of the communication link is established using a stream control transmission protocol layer and exchanging signaling messages is achieved using a user adaptation layer.

56.   (Currently Amended) ~~Method~~ The method of claim 54, wherein initializing of the communication link and exchanging of signaling messages is achieved using a stream control transmission protocol layer.

57.   (Canceled)

58.   (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising;
    a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one signaling association;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from ~~said~~ the signaling source node and ~~to map~~ for mapping the signaling target node name into a peer signaling association.

59.   (Currently Amended) The communication apparatus of claim 58, wherein said name mapping unit is ~~comprised in said~~ implemented in the second protocol implementation unit.

60.   (Currently Amended) The communication apparatus of claim 58, wherein said name mapping unit comprises a mapping data interface unit ~~adapted to distribute and/or receive~~ for distributing and/or receiving signaling association attributes via ~~said~~ the signaling control layer.

61.   (Currently Amended) The communication apparatus of claim 58, wherein said name mapping unit comprises a memory unit ~~adapted to store~~ for storing signaling association attributes locally in the communication apparatus.

62.   (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising:

a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer (SCTP) of the protocol stack on top of a packet transfer network (IP) for ~~exchange of~~ exchanging signaling data via at least one signaling association;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from the signaling source node and ~~to map said~~ for mapping the

signaling target node name into a peer signaling association: and, said mapping unit ~~further comprises~~ including a target node name resolution unit ~~adapted to map~~ for mapping a destination name into ~~said~~ the peer signaling association according to a specified algorithm, wherein the target node name resolution unit is a client/server type responding to name translation requests from signaling source node clients in a local and/or remote manner.

63. (Canceled)

64. (Currently Amended) The communication apparatus of claim 62, wherein ~~said~~ when mapping the destination name into the peer signaling association, the target node name resolution unit ~~is further adapted to consider~~ considers at least one criterion selected from a group ~~comprising~~ consisting of target node capability, target node load, and routing criteria association attributes ~~to map said signaling target node into said peer signaling association~~.

65. (Currently Amended) A communication apparatus running a protocol stack implementation for interworking between a signaling source node and a signaling target node, comprising:

a first protocol implementation unit ~~adapted to run~~ for running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one signaling association;

a second protocol implementation unit ~~adapted to run~~ for running a user adaptation layer of the protocol stack on top of said signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node; and

~~wherein~~ a name mapping unit ~~is adapted to receive~~ for receiving a signaling target node name from the signaling source node and ~~to map said~~ for mapping the signaling target node name into a peer signaling association, ~~and~~ said name mapping unit ~~further comprises~~ including a fault management unit ~~adapted to detect~~ for detecting an inoperative peer signaling association and/or an inoperative signaling transport

address in a peer signaling association and ~~to select~~ for selecting another signaling transport address under ~~said~~ the same signaling target node name.

66.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of ~~said~~ the signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping ~~said~~ the signaling target node name into a peer signaling association.

67.   (Currently Amended) The method of claim 66, ~~which comprises a step to check~~ further comprising checking an availability of ~~said~~ the peer signaling association and triggering a build-up thereof.

68.   (Currently Amended) The method of claim 66, ~~which further comprises a step~~ further comprising distributing and/or receiving signaling association attributes via ~~said~~ the signaling control layer.

69.   (Currently Amended) The method of claim 66, ~~which further comprises the step of~~ further comprising storing signaling association attributes locally at the signaling source node.

70.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of ~~said~~ the signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping ~~said~~ the signaling target node name into a peer signaling association; ~~wherein said mapping of said signaling target node name into said peer signaling association is~~ said mapping step being carried out according to a specified algorithm.

71.   (Original) The method of claim 70, wherein said specified algorithm is a query responsive database algorithm.

72.   (Original) The method of claim 70, wherein said specified algorithm is a table lookup algorithm.

73.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, said method comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ exchanging signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of ~~said~~ the signaling control layer for ~~support of~~ supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping ~~said~~ the signaling target node name into a peer signaling association[[:]], said mapping step including considering at least one criterion selected from a group ~~comprising~~ consisting of target node capability, target node load, and

routing criteria association attributes ~~when mapping said signaling target node name into said peer signaling association~~.

74.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, <u>said method</u> comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ <u>exchanging</u> signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of ~~said~~ <u>the</u> signaling control layer for ~~support of~~ <u>supporting</u> signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node<u>;</u> ~~and~~

mapping ~~said~~ <u>the</u> signaling target node name into a peer signaling association;

detecting an unreachable peer signaling association and/or an unreachable signaling transport address in a peer signaling association<u>;</u> and

selecting another signaling transport address under ~~said~~ <u>the</u> same signaling target node name.

75.   (Currently Amended) A method of running a protocol stack implementation for interworking between a signaling source node and a signaling target node, <u>said method</u> comprising ~~the steps of~~:

running a signaling control layer of the protocol stack on top of a packet transfer network for ~~exchange of~~ <u>exchanging</u> signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of ~~said~~ <u>the</u> signaling control layer for ~~support of~~ <u>supporting</u> signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node<u>;</u> ~~and~~

mapping ~~said~~ <u>the</u> signaling target node name into a peer signaling association;

<u>and</u>

maintaining a data base storing name spaces and/or association attributes ~~and updating said data base~~.

76.   (Currently Amended) The method of claim 75, wherein ~~said updating of said~~ the step of maintaining the data base includes at least ~~comprises~~ one step selected from a group ~~comprising~~ consisting of signaling node registration, mapping node registration, signaling node deregistration, mapping node deregistration, and signaling node routing policy change registration.

77.   (Currently Amended) A computer program product directly loadable into the internal memory of a communication device, ~~comprising software code portions for performing the steps of claim 66~~ wherein, when the product is run on a processor of the communication device, the device performs the steps of:

running a signaling control layer of the protocol stack on top of a packet transfer network for exchanging signaling data via at least one signaling association;

running a user adaptation layer of the protocol stack on top of the signaling control layer for supporting signaling connection control services used by the signaling source node;

receiving a signaling target node name from the signaling source node; and

mapping the signaling target node name into a peer signaling association.